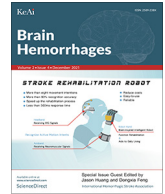




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



## Correspondence

## SARS CoV2 vaccine and aphasia

Pathum sookaromdee<sup>a,\*</sup>, Viroj Wiwanitkit<sup>b</sup><sup>a</sup> Private Academic Consultant, Bangkok, Thailand<sup>b</sup> Honorary Professor, Dr DY Patil University, Pune, India

## Dear Editor

We would like to share ideas on “Aphasia seven days after second dose of an mRNA-based SARS-CoV-2 vaccine.”<sup>1</sup> Finsterer and Korn concluded that “*Though the pathophysiology of ICB remains unexplained a causal relation between ICB and the . . . . . monitored in patients undergoing SARS-CoV-2 vaccination.*”<sup>1</sup> A rheological change after COVID-19 vaccination is possible. There are many possible explanations. Of several possible mechanisms, an increased blood viscosity after vaccination might induced thrombohemostatic problem. In a recent report, an increasing blood viscosity, equal to 2.4 cp is observed in normal healthy population (baseline normal blood viscosity = 1.5 cp).<sup>2</sup> If an increasing blood viscosity reached hyperviscosity level, 5 cp, a thrombohemostatic complication might occur. In the present case, the patient has an underlying thrombohemostatic disorder, myocardial infarction. According to the previous report, a person with myocardial infarction has elevated blood viscosity accounted for 0.19 cp comparing to background value.<sup>3</sup> Hence, there is a decreased safety interval between background blood viscosity and hyperviscosity level in a COVID-19 recipient who has an underlying myocardial infarction.

Therefore, there is a possible increased risk to develop any thrombohemostatic disorder. In the present report, it is interesting to evaluate the rheological change of the patient, which might be a pathogenesis of the aphasia disorder.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## References

1. Finsterer J, Korn M. Aphasia seven days after second dose of an mRNA-based SARS-CoV-2 vaccine. *Brain Hemorrhages*. 2021. Online ahead of print Jun 24.
2. Joob B, Wiwanitkit V. Expected Viscosity After COVID-19 Vaccination, Hyperviscosity and Previous COVID-19. *Clin Appl Thromb Hemost.* 2021;27. 10760296211020833 Jan-Dec.
3. Fuchs J, Weinberger I, Teboul A, Rotenberg Z, Joshua H, Agmon J. Plasma viscosity and haematocrit in the course of acute myocardial infarction. *Eur Heart J.* 1987;8 (11):1195–1200.

\* Corresponding author at: Private Academic Consultant, Bangkok, Thailand.  
E-mail address: [pathumsook@gmail.com](mailto:pathumsook@gmail.com) (P. sookaromdee).